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ABSTRACT

This study examined the patterns of Taiwanese early childhood preservice teachers' professional beliefs about teaching and learning. The instrument included six open-ended questions that examined preservice teachers' perceptions of their roles as teachers, of ways that children learn, and of their relationships with children. Participants were 298 preservice teachers who were completing either their first or third year of a teacher training program. The study aimed primarily at description or conceptualization of central beliefs and interrelationships among them. Content analysis and the grounded theory method were the predominant mode of data analysis. The data suggest that preservice teachers' beliefs can be conceptualized and organized systematically. Their beliefs can be divided into three categories: goals for which the teacher is responsible, a deep commitment to teaching, and enhancing self-cultivation in which students are responsible for their own learning. Interrelationships among teacher role, images of classroom practice, ways children learn, the reasons for schooling, children's needs from teachers, and the relationship between teachers and students were constructed by the researchers. The study shows that teacher education in Taiwan plays a major role in preserving, broadening, and strengthening Chinese educational beliefs. Contains 62 references. (Author/HTH)

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Taiwan Early Childhood Pre-service Teachers' Professional Beliefs

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Abstract

The study aimed to examine the patterns of early childhood pre-service teachers' professional beliefs about teaching and learning. The instrument included six open-ended questions that examined pre-service teachers' perceptions of their roles as teachers, of ways that children learn, and of their relationships with children. Participants included 298 pre-service teachers who were either completing their first year of a teacher training program or who were completing their third year of the program. This exploratory study aimed primarily at description or conceptualization of central beliefs and interrelationships among them. Content analysis and the grounded theory method were the predominant mode of data analysis. The data suggest that pre-service teachers' beliefs can be conceptualized and organized systematically. Their beliefs can be divided into three categories: goals for which the teacher is responsible, a deep commitment to teaching, and enhancing self-cultivation in which students are responsible for their own learning. Interrelationships among teacher role, images of classroom practice, ways children learn, the reasons for schooling, children's needs from teachers, and the relationship between teachers and students are constructed by the researchers. The study shows that teacher education in Taiwan plays a major role in preserving, broadening and strengthening Chinese educational beliefs. This finding can serve as a tool for discovering channels to improve an existing teacher educational system in Taiwan.

Taiwan Early Childhood Pre-service Teachers' Professional Beliefs

Research studies on teacher education have emphasized the need to focus on the beliefs that prospective teachers bring with them to teacher preparation programs (Bennett, 1997; Brookhart & Freeman, 1992; Pajares, 1992; Prawat, 1990). Derived in part from their experiences as a learner (Buchmann & Schwille, 1983; Butt & Raymond, 1987; Calderhead & Robson, 1991; Gurney, 1995; Hollingsworth, 1989; Holt-Reynolds, 1992; Johnson, 1994; Knowles & Holt-Reynolds, 1991; Lortie, 1975; Powell, 1996; Shuell, 1992; Zeichner & Liston, 1987), pre-service teachers' beliefs systems may influence teachers' learning through their willingness to seek professional knowledge (Collinson, 1996), how they obtain knowledge, interpret the course content and integrate monitoring during teacher education (Anderson, 1984; Anderson & Bird,1994; Anderson & Holt-Reynolds, 1995; Bennett, 1997; Buchmann & Schwille, 1983; Crow, 1987; Hollingsworth, 1989; Johnson, 1994; Shulman, 1987; Sigel, 1985; Tillema,1994; Weinstein, 1990).

Reviewing the structure of education and conceptions of teaching and learning in Taiwan, one notes that teacher education in Taiwan has special features and natures which reflect cultural perspectives and social attitudes. Because Taiwan is placing an emphasis on preserving Chinese customs and Confucian beliefs and observances that influence systems of belief embedded in Chinese culture, potential teachers from Taiwan may not share the same concerns about teaching and learning as teachers in Western cultures. For example, using a modified form of the Gibson and Dembo (1984) Scale, a study of early childhood pre-service teachers' efficacy beliefs in Taiwan (Lin & Gorrell, 1998) found a four factor structure of teacher efficacy scale in a Chinese culture instead of two domains of efficacy beliefs which were found in US studies. The underlying

concepts of Taiwan pre-service teachers' sense of efficacy were linked to their willingness to take special responsibility for students' learning and their perspectives concerning parental support and home environment.

Pre-service teachers' beliefs about the teaching profession are connected to their beliefs about teacher role which are reflected in their images of classroom practices (Calderhead & Robson, 1991; Comeaux, 1992; Johnston, 1992; Lin & Spodek, 1994; Maxson & Mahlios, 1994; Tobin & LaMaster, 1995). Comeaux (1992) found that entry students believed the teacher's role is to transmit their knowledge, make learning fun and make students feel good about themselves. The entry students viewed that the best conditions for learning we are where student opinions are respected, where the time is spent in discussion, and where the classroom setting is non-threatening. Maxson and Mahlios (1994) asked college students in the initial phase of their professional preparation to write a description and draw a picture about their images of teaching. They found that students entered teacher education with complex ideas, but two themes, learning as enjoyment and teaching as maintaining control, were revealed from analyzing students' written responses.

Pre-service teachers' images of teaching and learning are viewed as an indicator of the growth of teachers' knowledge in teaching. Those images are considered as subject to change. Teacher education learning experiences affect this change (Calderhead & Robson, 1991; Clandinin, 1986; Hamilton & Hitz, 1996). Calderhead and Robson (1991) found that pre-service teachers hold particular views and images of teaching which influenced their interpretation of learning experiences in the teacher education program. Lin and Spodek (1994), Connelly and Clandinin (1988) and Johnston (1992) found that pre-service teachers have specific images of the

classroom and that these images appear related to how they intend to teach.

Teacher's professional beliefs are embedded within images of teaching and learning (Tobin, 1993). Images of classroom practices can be related to the pre-service teachers' ideas about how children learn which is evident in their beliefs about teaching (Barnes, 1987; Calderhead & Robson, 1991). For instance, one of the prospective teachers in Calderhead and Robson's study viewed learning as questioning and talking among children and between the teacher and children, so the prospective teacher commented on getting children interested enough to ask questions in her teaching.

Klein's (1996) findings reveal a structure of beliefs about learning and knowledge which include the belief that teaching should facilitate learning through discovery, that children have the ability to think reflectively and to understand abstract concepts related to their age, that knowledge is in the mind not in books, that teachers should transmit knowledge and skill with corrective feedback, that knowledge and processes of learning are important, that activities which are interesting and enjoyable promote learning, that individuals have their own ways of learning, that knowledge is influenced by the values of those who create it, and that there are cognitive processes which indicate that students should learn through questioning.

Pre-service teachers' beliefs concerning their relationships with students show their beliefs to be related to teacher autonomy and classroom control (Shoham, 1995; Wolfe & Engel, 1978). For example, pre-service teachers' responses concerning teacher-student relationships can confirm or deny their willingness to share control with students, to foster students' autonomy which refers to the ability to govern themselves, and to enhance mutuality in the relationship. Wolfe and Engel's (1978) survey of students' beliefs about the nature and need of children revealed factor structures

which included children's irresponsibility and need for control, personal adjustment and social learning, and children's need for love.

Pre-service teachers enter teacher education programs with various ideas about teaching and learning which reveal both constructivist and transmission-oriented views. For instance, entry level pre-service teachers tend to see teaching as dispensing information (Brookhart & Freeman, 1992), as a form of telling (Comeaux, 1992) or as a process of facilitating through discovery (Klein, 1996). Learning should be fun and enjoyable (Comeaux, 1992; Maxson & Mahlios, 1994) or should be followed with corrective feedback (Klein, 1996). Most prospective teachers complete their teacher education programs without having awareness of their misconceptions about teaching and learning (McDiarmid, 1990). However, awareness of beliefs is essential for promoting knowledge restructuring in learning to teach (Clark, 1988), and for prospective teachers' receptivity to teacher education (Bennett, 1997; Pajares, 1992). Unexamined, beliefs limit the understanding of course work (Anderson & Holt-Reynolds, 1995), and beliefs may be difficult to change, even though awareness and knowledge about beliefs regarding teaching and learning is a critical factor in becoming effective teachers (Bennett,1995, 1997). Therefore, understanding pre-service teachers' beliefs is an important step in knowing, learning to teach, and teaching practices within the educational and cultural context which mediate among the beliefs, teacher's learning and practice of teachers.

Building upon earlier studies that examined pre-service teachers' beliefs about teaching and learning (e.g., Calderhead & Robson, 1991; Johnston, 1992; Klein, 1996), in this study, we explored pre-service teachers' perceptions of: their roles as teaches, children's learning, and their relationships with children. By examining patterns of pre-service teachers' beliefs in Chinese social

values, the study was intended to generate insights into cultural perspectives, social attitudes to teacher education itself and to the values that they embody in Taiwan.

Method

Participants.

The sample was drawn from one polytechnic institute and four teachers colleges in Taiwan. Two hundred and ninety-eight pre-service students participated in this study. The sample was composed of two groups: 188 students completing their first year of the teacher training program and 110 students completing their third year of the teacher training program and after teaching for one week in a kindergarten. There were 137 beginning students and 71 ending students from teachers colleges; 51 beginning students and 39 ending students from the polytechnic institute. Entering teacher candidates began college as a homogeneous group of individuals. Ninety-nine percent of the subjects were under twenty-five years of age. The difference between teachers colleges and the polytechnical institute is in the mission of the organization. The teachers colleges prepare kindergarten and elementary school teachers for classroom work. The polytechnical institute provides professional education in child care service to teachers and child care specialists alike. Because Taiwan's teacher education curriculum is adopted nationally, requirements varied little between programs. Teacher education programs position field experience largely at the end of the preparation program. All participants in the sample were working toward a bachelor's degree. Pre-service teachers participated voluntarily in the study by completing questionnaires in 1996.

Instruments.

The instrument was created by Gorrell, Hazareesingh, Carlson, and Stenmalm-Sjoblom

(1995) in order to examine pre-service teachers' beliefs about teaching and learning. This instrument is currently being used by researchers in studies of teacher beliefs in several countries (Brazil, Korea, Russia, Sweden, USA), and, because of its open-ended questions that allow individual responses, it is considered to be a valid approach for studying attitudes of both students planning to be teachers and teachers.

The exact questions in the instrument are as follows: (1) What will be your most important roles as a teacher? (2) Imagine that you are in your first teaching job. Describe what will be going on in your classroom. (3) What are the best ways that children learn? (4) What are the most important reasons for children to go to school? (5) What will your pupils need most from you as a teacher? (6) What relationships do you expect to have with your pupils? Demographic information such as age, gender, and minor or collateral field and degree was gathered in the first part of the questionnaire.

Procedure.

Questionnaires were translated into Chinese by two graduate students who could speak Chinese and English and who reached a consensus about the Chinese version of the questionnaire. The Chinese version was distributed to students in Taiwan during regularly scheduled school days. The respondents were asked to write answers to specific questions related to their attitudes toward teaching and learning. Responses to the questions were coded according to major themes in order to examine pre-service teachers' answers and to identify patterns that might exist.

Translation. The written responses from the six open-ended questions were examined by two graduate students who speak Chinese and English. Key Chinese words, phrases or terms in the written responses were identified independently. Through discussion, negotiation, and

reference checking, a consensus between two independent translators was achieved.

Sorting. Each key word was put on index cards according to the two study groups (beginning group, ending group) and question responses (1 to 6) and were sorted into the resulting twelve piles. After each written response was printed on a separate 3x5 index card, one researcher sorted the cards into piles based on content analysis that made sense to that researcher (Guba & Lincoln, 1981; Holsti, 1969).

Coding Written Responses. The frequency of each of the key words, phrases or terms in the written responses were identified independently. From those key words, phrases or terms, descriptive data related to teachers' role, perceptions about teaching young children, perceptions about best ways for young children to learn, the purpose of school for children, children's needs, and the relationship between teachers and students were generated. It was assumed that the most frequent responses revealed the prospective teachers' common beliefs about teaching and learning. By grouping common beliefs, the researchers created a general conceptual framework.

After the grouping was finalized, each common theme was labeled to indicate its content. The common theme constituted an important meaning component of key words related to pre-service teachers' beliefs about teaching and learning. Selected main clusters of written responses were assigned to common themes according to identified key words.

Analyses.

In this study, data were coded in Chinese and English versions and coders achieved consensus between these two. One researcher and one graduate student reviewed initial English-translated answers to identify preliminary themes. After identifying the initial key words, the researcher coded those key words into additional subsets of key ideas (Chinese version). Next, the

preliminary themes (English version) were refined based on the additional subset of themes (Chinese version). The dependability of the coding and categorizing used in data analyses were assessed by two graduate students who speak English and Chinese. First, they practiced coding categories for the responses of randomly selected subjects. Discrepancies were discussed, sources of confusion were clarified, and then the two coders began to categorize responses independently. Through a process of repeated independent coding (Bogdan & Biklen, 1992), they achieved consensus and evolved themes for the written responses.

We applied the concept mapping strategy (Beyerbach, 1988) to conceptualize the common themes across six categories and the relationship among these six categories. Maps were created through the process of checking and theorizing. In order to consider the credibility of concepts built from the process of questioning, checking, and theorizing (Kvale, 1989), we conducted focus groups composed of beginning and ending pre-service teachers in Taiwan as a means of (a) confirming the emergent themes from the six open-ended questions, and (b) looking for their explanation for the relationship among those emergent themes. The focus groups followed up the research findings and helped to ensure objectivity and validity (Franklin & Knight, 1995).

For the focus groups, we chose twenty pre-service teachers who were at early points in their professional programs and twenty pre-service teachers who were at ending points in their programs from two different institutes in which data were collected. An hour-long discussion was tape recorded. The tapes were not transcribed. The record of the focus group sessions consists of notes that recorded the views of the focus group which the researchers then used to compare with the research findings. Moreover, the data from the focus groups were used to confirm the models, which graphically represent pre-service teachers' beliefs about teaching and learning. To test the

relations among six categories, we framed questions to include the types of relationships among categories to be analyzed. For example, to elicit pre-service teachers' responses about the relationship between what ways children learn and their view of themselves as teachers, we asked, "Think of ways which learning is taking place. What are you going to do as a teacher?" Similarly, questions regarding the relationships among teacher roles, images of classroom teaching and kinds of relationships with students were included in the discussion. The responses to these questions were mapped to develop a framework of the pre-service teachers' views of these relationships. Using their words as concepts, we drew path diagrams which we used to compare with the models.

Results and Discussion

This study addressed several concerns about pre-service teachers' beliefs, namely: What are the views of pre-service teachers in Taiwan about teaching, learning, and relationships with students? On what views do they seem to relate to one another? An effort was made to integrate data about Chinese culture that influence the pre-service teachers' beliefs about teaching and learning.

By using the grounded theory approach (Strauss & Corbin, 1990), we created a model of Taiwan pre-service teachers' beliefs about learning and teaching. Creating the model was a three-step procedure. First, the initial coding of written responses were examined for emerging themes, concepts, and dimensions of those concepts (Strauss, 1987; Strauss & Corbin, 1990). Those concepts were divided into six categories corresponding to the 6 open-ended questions. Common theme labels for each of these categories are listed in Table 1, which indicates emergent concepts from the six questions.

Insert Table 1 about here

Second, we applied the concept mapping strategy (Beyerbach, 1988) to conceptualize the relationships among common themes across the six categories. These conceptual maps created: the internal model of teaching and learning in Taiwan (see Figure 1), the relationship among teacher role, images of classroom practice, ways children learn and teacher-student relationship (see Figure 2), and the relationship between reasons for schooling and children's needs from teachers (see Figure 3). We developed those tables or figures independently as a result of examining closely pre-service teachers' written responses. Third, we used a focus group strategy to confirm and to test the findings. The results from the focus group supported the internal model and emergent conceptual framework.

The Internal Model of Teaching and Learning in Taiwan

Goals for Teaching. Forty percent of the total responses related to the goals for teaching. Overall, a number of pre-service teachers believed that enhancing students' socialization (23%), promoting character cultivation (5%) and maximizing intellectual abilities (12%) were three important goals of teaching. Each of these terms contains a set of defining characteristics subsumed under the concepts related in this statement (see Table 2).

Insert Table 2 about here

Developing students' intellectual abilities and promoting character cultivation are the central

part of the concept of the individual which is highly related to individual potential and effort to become an autonomous self. Intellectual abilities are essential for character and social development. For example, one who has better intellectual ability is likely to have a better sense of moral or social judgment. Enhancing students' socialization is the major part of the concept of community. The concept of individual has to be exercised in society and be built upon the concept of community. In order to balance these two concepts, pre-service teachers report that they set up their goals for learning toward self-cultivation to achieve socialization, intellectual abilities, and character cultivation. Setting up learning goals to achieve teaching goals indicates a strong connection between goals for teaching and goals for learning. They believe that teaching and learning should achieve the same destination. Mentorship, affectivity, situational learning and instruction are the means to approach the goals for teaching as well as self cultivation being another way to approach the goals for learning. It makes good sense to consider self cultivation as an internal process for achieving the goals of learning. The data suggest that one of the challenges for pre-service teachers is trying to balance their concept of individual and their concept of community.

Commitment to Teach. Forty-six percent of the responses related to perspectives of commitment to teaching. The underlying concepts can be identified from the traditional Chinese conception of teaching which provides a specific guideline for teaching practice. Twenty-eight out of 298 respondents noted: "Teachers teach through mentorship, affectivity, situational learning and instruction." These four themes which reflect Confucius' pedagogical orientation were central in pre-service teachers' written responses.

The present finding in conceptualizing mentorship, affectivity, situated learning and

instruction as a pathway to the goals for teaching (socialization, character cultivation, cognition) and learning (self-cultivation) are related to the traditional views about teaching and learning in Chinese society. They are considered to be the most effective process in achieving goals for teaching and learning in the traditional Chinese sense, as well as being revealed in the data.

Goals for learning. One could conceive that students' self-motivation, self-study and self-discipline, which is part of the concept of self-cultivation, corresponds with teaching goals to achieve socialization, character cultivation and cognition. Self-cultivation, which is a process of self-inquiry learning, forms a broad conceptual category which is one of the core ideas in Confucianism. These pre-service teachers' perceptions of the goals of teaching consistently point to their belief that self-cultivation is a process of self-inquiry, socialization, character, and cognition. Twenty percent of the responses showed that a teacher should arm children with their own capability to learn. Moreover, ten percent of pre-service teachers commented that a teacher should enhance children's ability for self-cultivation in order to develop their intellectual characteristics, good characters and social growth. Pre-service teachers who assume enhancing students' socialization, promoting character cultivation, and maximizing intellectual abilities for goals of teaching would also emphasis those areas as goals for learning through their commitment to teaching and through students' commitment to learning.

In sum, analysis of written responses suggests that pre-service teachers' beliefs can be conceptualized into an internal model (Figure 1) which indicates their conceptions of teaching and learning can be organized in a systematic way. The beliefs pre-service teachers hold can be divided into goals for which the teacher is responsible (for students' socialization, character cultivation and intellectual ability), a deep commitment to teaching (through mentorship,

affectivity, situational learning and instruction) and enhancing self-cultivation which students are responsible for their own learning (through self-motivated, self-study and self-discipline) to achieve the goals of socialization, character cultivation and intellectual ability. This internal model reflects the foundation and major concepts of teaching and learning.

Insert Figure 1 about here

Figure 1 presents the internal model of teaching and learning in Taiwan. The themes in boxes function as indicators of pre-service teachers' views. These themes are used in this path diagram to denote hypothesized processes involving the entire system of belief regarding teaching and learning. Goals for teaching and learning operate as conceptually distinct factors. This internal model represents a pattern of teaching commitment that is determined by four forms of teaching (mentorship, affectivity, situational learning and instruction). One-way arrows represent conceptual relationships and thus indicate the impact of one factor on an other. In Figure 1, for example, the four unidirectional arrows leading from "goals for teaching" to each of four themes, suggest that these four themes are the means to achieve "goals for teaching." Pre-service teachers believe that through their commitment to teaching (mentorship, affectivity, situational learning, and instruction), they can achieve the goal for learning (self-cultivation). Self-cultivation is a way to accomplish socialization, character cultivation, and cognition. The internal model stresses the significance of mentorship, affectivity, situational learning, and instruction in teaching and learning. It also stresses the importance of providing for the sense of self-cultivation of students for achieving socialization, character cultivation and intellectual abilities. The closed path indicates

"goals for teaching" and can be traced from "self-cultivation" which is the goal for learning, through mentorship, affectivity, situational learning and instruction. Such a closed path represents the core concept of teaching and learning. These terms are labels and do not imply distinct learning theories.

Emergent Conceptual Framework

Teacher Role. Pre-service teachers perceive themselves as teachers in several ways which underlie a sense of Chinese teacher responsibility. Professional orientation, teachers' characteristics and considering students stand in reciprocal relationship with each other and with those areas that contribute directly or indirectly to help children learn.

In their definition of a professional, pre-service teachers perceive the teacher as knowledgeable and moral. Their beliefs about teacher roles parallel the professional responsibility for teaching which indicates the willingness of pre-service teachers to accomplish teaching goals and their ability to assume personal responsibility for their behaviors as teachers, connecting strongly with their sense of teacher qualities. Possessing professional knowledge and skill (30%) is the key to good teaching.

Another recurrent theme is the dominance of their own characteristics to be teachers, such as love (49%), patience (54%) and enthusiasm (8%). These relate to teachers' characteristics that have reference to personal characteristics or professional character which are demanded by the general ideas of teaching in Chinese society.

Personal characteristics also are expressed by pre-service teachers regarding ways children learn and their images of classroom practice. Personal characteristics frame the major concepts of what it means to be good teachers. Pre-service teachers emphasize personal characteristics as a

major part of their own role, in order to be a role model for students, and expect their students to master their own learning through self-motivation and a self-discovery approach. We can see that the concept of individual which is related to individual potential and effort to become an autonomous self has a special place in teaching and learning. In teaching, the concept of individual means personal characteristics to teach which include moral behaviors and intellectual talents. In learning, the concept of the individual means an active individual which includes learner characteristics and the learner's effort to learn. These personal characteristics and effort are the core concept of the individual from the Chinese perspective, and are commented on in teacher roles, ways children learn, and images of classroom practice.

A number of pre-service teachers stress the importance of self-study and self-motivation in teaching (6%). Their emphasis implies that an emphasis on self reflects the concept of individual improvement and renewal which are required in teaching. One response reflected on this:

> "Self-reflection is the key to entry into the knowledge and power of the profound commitment of teaching."

From the Chinese perspective, self-reflection helps pre-service teachers to be open to change for good reasons and increases their willingness to commit themselves to teaching.

Chinese culture emphasizes the pursuit of morality and knowledge as the life-long process through the means of self-improvement and renewal which are the long-term goals for teachers to achieve in the course of their professional life. This concept serves as a motivating power for spirit, morality and knowledge. A number of pre-service teachers depicted themselves as a self-contained world (5%) which involves developing the ability of self-cultivation. In other words, self-cultivation, which is a process of self-inquiry learning, includes self-direction,

self-monitoring, self-analysis and self-evaluation. Self-cultivation is the way to self-improvement and renewal. "Thinking of teaching and learning, I try to improve myself first, " as one pre-service teacher expressed this point.

The common themes running through these four categories (teacher role, images of classroom practice, ways children learn and teacher-student relationship) show that teachers consider individual students, emphasize teacher personal characteristics, relate to students' characteristics, and focus on an individual way of learning and self-discovery approach to learning. The emphasis on self tends to reinforce the image of teacher and student as autonomous individuals. Moreover, the concept of self which emerged from the data creates an image of traditional Chinese teachers who possess personal and professional characteristics. Those characteristics combine intellectual and moral features.

The third teacher role relates to teachers' consideration of students, their care for students, and their trying to understand from students' perspectives. Twelve percent of the comments focused on the value of knowing the nature of the learners and knowing who they are personally and culturally. Those comments indicate that teacher role should be considered around students' perspectives, needs, interests, potential, and differences in order to contribute to social, intellectual, and character development. Those comments also reflect acceptance of individualism, stressing the significance of social and cultural factors in learning.

In sum, in the pre-service teachers' descriptions of their roles as teacher, we can detect that they provide a vision of the joining of professional and personal responsibility to identify the students' needs, interests, and perspectives, and they are required to have great patience and love to wean children gradually from their excessive dependence on authority, to increase students'

sense of confidence in the learning process. The teachers' role is to prepare their students for taking on learning responsibility to achieve self-cultivation as a goal for learning.

Images of Classroom Practice. Pre-service teachers imagine classroom teaching in a wide variety of ways. We divided these images into four dominant views: (a) teachers' characteristics, (b) considering individual students, (c) building relationships with children, and (d) pedagogical activities in classroom and pedagogical concepts. Teaching practice relates to teachers' personal characteristics to teach which correspond with their views as teachers. Recurring themes such as being a role model, caring, being flexible, being humorous, and having professional knowledge indicate that pre-service teachers have concerns about their own characteristics as a teacher.

Confucius expressed a system of social and political views that challenged the pristine status quo of China during the Chou dynasty. He is an example of the greatest educator in Chinese history who brought his own concepts to educating his students. He demonstrated that from the concept of teaching in Chinese society, teachers are expected to bring moral arguments into the classroom through their examples. Teachers' classroom behavior and presentation, in turn, are assumed to have an effect on the intellectual and social development of the children under their supervision. This assumption can explain one of the views which emerged from images of teaching practice in the classroom--teachers' personal characteristics as teachers. Pre-service teachers believe that it is their responsibility through mentorship to foster moral and ethical views in their students by their own personal characteristics. In the Chinese tradition, teachers' strong sense of being moral authorities and role models make a great contribution to the internalization of moral values in students (Lee, 1990). The ideas they express in classes and the behavior they exhibit in public function as a model for their students and society at large. Some pre-service

teachers commented on this point of view: "Being a teacher of people."

Wang (1992) defined the images of good teachers who are required to be role models for their students in all respects and at all times. In the current study the images of good teachers illuminates why pre-service teachers' comment on constantly evaluating their own behaviors and teaching practices at both the cognitive and the ethical levels.

Considering and identifying students' interest; considering students' perspectives; meeting students' needs; considering individual differences in intelligence, personality, capability level and character; knowing students' background, family, character to teach, and individual difference are mentioned frequently in responses to the question about images of classroom practice. Those represent the pre-service teachers' beliefs about teaching situationally and individually. A belief that good teaching must reflect the teacher's attempt to consider the individual learners is seen as a derivative from their responses. "I particularly like to see my students actively work on their own because they are interested in it; because I have considered what they are and what they need." This comment is evident in pre-service teachers' beliefs about teaching practice as helping students to actively construct their own learning by considering students' interest, needs, and perspectives.

The notion of building a relationship with children (14%) emerged as an image which guided some pre-service teachers' thinking about teaching in the classroom. Pre-service teachers hold a dominant image of teaching which places importance on the relationship that the teacher establishes with the children. Five percent of the comments indicated that the formation of close relationships is a way of understanding individual students. This is consistent with Johnston's (1992) finding that establishing a teacher-student relationship is a way of understanding the

children's need and identifying the direction for learning, so they can direct their teaching into those considerations of individual differences, needs, and backgrounds. This notion is also consistent with their views as teachers because the same belief (consideration of students) is frequently mentioned in response to the question about teacher role. One pre-service teacher commented on her images of teaching:

> "First, the most important thing is to know your students in the class. But how? I have been thinking this since I had to teach a group of children a while ago. Building relationships with children, you can understand children's personalities, characteristics, family background. After all that you can develop the right strategies for teaching."

One may hypothesize that learning is facilitated through close teacher-student relationship. Pre-service teachers illustrate the notion of building relationships with children with their focus on individual children among these three categories: teacher's role, ways children learn, and images of classroom practice. They stress the importance of building relationships with children, connected with their vision of themselves as role models derived from the Chinese beliefs about teaching. The teacher-student relationship should be organized around teacher modeling, facilitating children learning, and identifying children's needs. In a similar sense, a number of pre-service teachers (8% of the respondents) believe that a close teacher-student relationship creates emotional bonds between teacher and students which are considered as ways of understanding individual student and making a connection between teachers' and students' points of views.

In general, their comments regarding pedagogical concepts can be divided into three aspects of teaching in the classroom: teacher effort, control, and integration of theory and practice. First, their teaching ideology relates to considering their efforts in teaching (for example,

do one's best, create good learning environment, get students motivated and interested, and active teaching). Second, their teaching ideology relates to establishing and enforcing class rules and maintaining discipline in the classroom. Third, their teaching ideology emphasizes the integration of theory and practice (for example, apply what was learned, facilitate learning, open education, developmentally appropriate teaching methods, and learning through play).

Examining the written responses regarding pedagogical activities and concepts, we found pre-service teachers comment a lot about principles but lack a clear conception of how they may act in the classroom teaching. Also, responses show few comments on the content of their learning and teaching strategies. Taiwan pre-service teachers's beliefs tend to be presented in general terms. These beliefs appear to arise from Chinese ways of thinking about teaching, the relationship between their images and language expression, and the interrelationship among understanding, principle, teaching experience and images.

Ways Children Learn. Roles as teachers, students' characteristics and individualized ways of learning are frequently mentioned in response to questions about teacher role, ways children learn and images of classroom practice. In these recurring responses across teacher role, ways children learn and images of classroom practice, pre-service teachers' conceptions of ways children learn reveal their conceptions of the essence of teaching. An example of this relationships may be found in one student's response:

> " The efforts I made in using individualized strategies to work with children are dependent on their characteristics of learning."

This finding is consistent with Barnes's (1987) and Calderhead & Robson's (1991) findings that pre-service teachers' ideas about children's learning is evident in their beliefs about teaching.

The patterns of pre-service teachers' beliefs regarding ways children learn appear in various ways in the following areas: self-discovery approach to learning, roles as teachers, students' characteristics, and individual differences. Those areas represent the pre-service teachers' beliefs that the initiative must be taken by students who are free to choose what they want to learn. This belief also deals with teaching where the teacher should take consideration of students' interests (beginning=16%, ending=15%).

In relation to students, pre-service teachers view the best way of learning to be where students have opportunities for self-discovery, where the atmosphere in the classroom is non-threatening, and where the teacher considers individual differences of students at the same time. These findings are consistent with Comeaux's (1992) finding that pre-service teachers' believe the best way learning occurs in non-threatening classroom settings. Taiwan pre-service teachers expect students to have the characteristics of motivation, active engagement, concentration, consistency, creativity, and interest in learning.

Relationship Between Teachers and Students. A number of responses related to the teacher-student relationship have at least two sets of underlying concepts associated with them: one was "demanding respect for authority" (14%), and another "teaching with affection and caring" (19%). In writing about the relationship between teacher and student where they have to be an authority figure, they make such comments as:

> " It's important to be an authority person in there, just as I will be respected. Children have to know that I am the teacher there."

The underlying concept about the teacher usually fulfills the role of authority.

> "My class will be like my family. I am the one who needs to take care of them. They are

just like my own kids, you know."

Some pre-service teachers regard teaching as an extension of their affection and caring. They comment about relationships with students in passionate terms.

A majority of pre-service teachers viewed the relationship between teacher and student as a form of "friendship." They showed the desire to be a friend to their students. Most pre-service teachers expressed this dual relationship with their students. In the conventional Chinese sense, a friend means the role of "cooperation, and equality".

". . . am turning into being more like a friend to the kids instead of like a teacher. We can really talk. They are really listening."

"I feel that my kids cooperate better when I talk to them as their friend."

One pre-service teacher expressed her belief related to teachers' and students' relationships which is viewed as having to be built on mutual love and respect.

"I had the luxury of private conversation with my elementary teacher."

"It was wonderful, It helped me really think about something I haven't really thought about. Throughout conversation, my teacher and I developed a relationship with mutual respect. I hope my kids love me and respect me as the way I have to them."

Joy and harmony are mentioned frequently in both groups which reveals the Chinese idea of a relationship. Typically, the relationship between teacher and student is envisaged where joy and harmony (beginning=16%, ending=17%.) prevail.

In sum, the conceptual framework comes from a content analysis of written responses (see Figure 2), and assumes that reciprocal relationships exist among teacher role, images of classroom practice, ways children learn and the relationship between students and teachers. A

belief in teacher role would necessarily bind a teacher to a belief in ways children learn and images of classroom practice. Generally, the pre-service teachers' beliefs about teacher role seems to bear on their idea about professionalism, consideration of student and their self characteristics in a way suggesting reciprocal relationships among them. In these recurring themes, role as teachers, students' characteristics and individualized ways of learning, across these three categories (teacher role, images of classroom practice and ways children learn), pre-service teachers' beliefs about learning reveal their beliefs of the essence of teaching. Building teacher-student relationships is mentioned in responses to the question about images of classroom practice and in responses to the question about relationship between teachers and students.

Insert Figure 2 about here

The interrelationships among pre-service teachers' views on teacher role, images of classroom practice, and ways children learn, and the relationship between students and teachers, as they relate to common themes, are graphically depicted in Figure 2. The first part of the model contains four categories (teacher role, images of classroom practice, ways children learn, relationship between teachers and students) which are presented in circles. Common themes that emerged from each category are presented in boxes. The arrows pointing from the categories to common themes indicate the teachers' view points on each category. The paths lead from four categories to the pre-service teachers' views. Finally, two-way arrows represent relationships between pairs of common themes. Thus, the bidirectional arrow linking common themes shown in Figure 2 implies that categories are conceptually associated with one another. The three

categories (teacher role, images of classroom practice, ways children learn) are postulated as being interrelated with each other. Because the dominant concern about considering individual student has appeared in response to the questions about teacher role, ways children learn, and images of classroom practice, this indicates that pre-service teachers have a belief that considering individual student is essential in thinking about teaching and learning.

Reasons for Schooling. The common themes which pre-service teachers revealed in their responses concerning reasons for schooling and children's needs are interrelated. Education in the Chinese sense carries within it a set of goals and values which are to guide, counsel, teach, educate, give sustenance, nourish, nurture, lend, facilitate, and grow. These concepts are contained in the two main roles of teachers; one is maximizing intellectual abilities and the other is fostering social, moral and ethical views in the students. School is a place where values, morals and ethical are priorities to be learned.

Teachers are assumed to have broad responsibility for students' moral and cognitive development. Considering "cognitive ability and knowledge"(29%) which is among the major comments related to reasons for schooling and "knowledge" (33%) are mentioned frequently in responsed the question about children's need from teacher, we can detect that pre-service teachers in Taiwan stress the importance of cognitive ability and knowledge. This can be understood in terms of an intellectual model for ethical and proper behavior which is a part of Chinese educational philosophy.

The intellectual model assumes that cognitive ability is necessary for social and moral development. In response to the questions about reasons for schooling and children needs from teachers, they emphasized teaching of social-moral development besides academic skills. They

considered schools to be agencies for providing children with opportunities to develop social relations with others, to experience the interactive life of the classroom, to acquire appropriate forms of behavior within society, to gain learning experiences, and to facilitate happy growth. Children are expected to be able to adjust to group life, enjoy their friends, and become interested in learning when they come to schools.

Pre-service teachers' beliefs reflect the trend that some of schools in Taiwan emphasize the development of academic skills, such as being able to know Chinese phonics, write one's name, count, and performance skills, such as being able to sing and dance. But a small portion of pre-service teachers mentioned that teaching practice is to transmit knowledge expressed in regard to teacher role (1%) and images of classroom teaching (1%) reflected an interesting phenomena. This phenomena can be used to help understand a focus on what the teaching-learning process means in modern Taiwan.

Open education is mentioned frequently in responses to questions about images of classroom practice and ways children learn. The belief represents teacher preferences for the teaching-learning process. This indicates that acquiring knowledge is not only through transmission but also involves the concept of open education which is influenced by Western pedagogy.

> "... I think that it is probably the best way for children to learn. The way I will do is setting up learning centers and giving them choices where they can work."

As indicated by the comment above, concerning learning centers and allowing children to choose from a variety of activities offered by the teacher, Taiwan pre-service teachers are adapted to Western ideas in their approach to the education of young children. Pan (1992) pointed out that

John Dewey's, Friedrich Froebel's, Maria Montessori's, and Jean Piaget's educational ideas have exerted an influence on the theory and practice of Taiwan early childhood education. My data suggested that Taiwan pre-service teachers' beliefs about teaching and learning reflect some degree of impact of such Western educational thought.

Whether revealed by statements of reasons for schooling, or children's needs from teachers, children are assumed to need continued opportunities for social development and academic training in order to build personal relationships with others, to obtain greater cognitive ability and knowledge, to learn how to cooperate with others, to learn how to behave within society and to have a consensual quality in terms of some reference group. The school experience enables students to be aware of their place in society and of value in their lives.

Pre-service teachers' responses in these two dimensions (reasons for schooling and children's needs from teachers) revealed different phenomena from their view point in response to the questions about teacher role, images of classroom practice, and ways children learn. The concept of community preceeded the concept of individual in responding to the questions about reasons for schooling and children's needs from teachers. Schools function as a social method in that they induct children into society by providing them with a collective experience. A collective experience is a way to facilitate students' attitudes, skills, and behavior patterns. The written response to the question about reasons for schooling revealed that an ideal person is built through membership in society. One pre-service teacher, for instance, commened that group experience is particularly suitable for individual children to make sense of being part of community. In a conventional sense, schools are charged to prepare students to fit into the whole of society.

A moderately high percentage of pre-service teachers in Taiwan consider that (a) the

reasons for schooling should be to help children develop their social ability (45%) and (b) that development of cognitive ability, and knowledge (29%) should be another major reason for schooling. The present study confirms findings from previous research that functions of schooling are academic, personal goals and social and d a strong tendency toward a conservative view of the function of school (Su, 1992) which should educate students and help them adjust in the society. "Inculcate social and cultural learning" is considered as an important reason for schooling by beginning-level and by ending-level groups. Social and cultural learning at school implies a sense of personal effectiveness which children feel in their relations with others of their age group (a sense of belong), an ethical purposefulness, and concern for community. This sense of personal effectiveness is the underlying concept of getting involved in social life for Chinese people. To cultivate students' adequacy with which the individual meets the standards of a social standard or responsibility expected of his or her cultural group is one of goals of schooling. This social and cultural goal for schooling can be understood in term of the sense of personal effectiveness. A small portion (2%) of written responses is related to personal goals (ex. self-development, growing happily) which indicates that pre-service teachers look at the function of school based on the sense of community.

Findings from pre-service teachers' written responses revealed a strong emphasis on social and cultural factors rather than on academic and intellectual development. They considered schools to be agencies for providing children with opportunities to experience the interactive life of the classroom (32%), to develop social skill and interpersonal relationship (21%), and to acquire appropriate forms of behavior within society (22%). Several comments related to this perspective:

"Children come to school for the interactive and social purposes."

This finding contrasts with Su's national study of the function of school in an American sample (Su, 1992) where teacher education students viewed basic skills education as the most important goal of school.

We can detect that adaptive function is a major concept of emerging and critical importance for why children should go to schools. The concept of adaptive function, from a Chinese point of view, should be related to intellectual (cognitive) growth, and social and cultural aspects of a child's coping skills (ex. interaction with others, appropriate forms of behavior within society, cultivation of personal character, morality and personality). Schooling broadens the child's everyday life to the extent that the child desires active learning and a social life. "Interactive life of the classroom", one of the functions of schooling, is sufficiently well organized or purposeful to help the child develop a sense of identity with his or her communities.

Children's Needs from Teachers. A special version of this sense of responsibility of the teachers for student learning appeared in the written responses of pre-service teachers who commented on personal needs, on character cultivation, on social and cultural needs and on intellectual needs in response to the questions about teacher role and children's needs. Teacher responsibility is to consciously direct the students' value judgment and conduct. A child has the emotional needs for love, support, praise, prestige, appreciation or attention from the teacher. The bulk of comments dealt with principles of behaving in society (31%), and requiring knowledge (33%) which indicate that pre-service teachers are sensitive to the culture, academic, and personal needs of students in terms of their intellectual contribution, or their nurturing of personal character and the capacity for responsible human relationships, and experience within society.

The principles of behaving are an essential idea for children's needs to adapt to society (beginning=24%, ending=27%). Interrelated themes such as courtesy and etiquette which include manner or polite social behavior in relating to people (beginning=5%, ending=8%) are related to the principle of behaving in society. These interrelated themes indicated the same belief that pre-service teachers hold in responding to the questions about reasons for schooling and children's needs from teachers. They emphasized the importance of building the sense of community in educating young children at this point. Knowing the principle of behaving within social life gives children confidence and stability to achieve social harmony as an underlying goal. Children's needs from teachers reveal the concept of what should be learned. In brief, children are expected to benefit from the teachers by being stimulated in social, emotional, intellectual development which relate to the reasons for schooling.

Insert Figure 3 about here

The relationship between reasons for schooling and children's needs from teachers, as they relate to common themes, are graphically depicted in Figure 3. In Figure 3, two categories (reasons for schooling and children's needs from teachers) are presented in circles. Common themes having emerged from these two categories are presented in boxes. The one-way arrows pointing from the categories to common themes indicate the teachers' view points on each category.

Two-way arrows represent conceptual relationships between pairs of common themes. Recurring themes (social, cultural, and academic) are mentioned in responses to the questions

about reasons for schooling and children's needs from teachers. Beliefs about reasons for schooling exist in a context of beliefs about children's needs from teachers. For example, appropriate forms of behavior within society (beginning=31%, ending=13%), one of views regarding reasons for schooling, is mentioned frequently in responses to children needs from teachers (beginning=24%, ending=27%). Thus, the bidirectional arrow linking common themes shown in Figure 3 implies that these two categories are conceptually associated with each other based on recurring themes in response questions about reasons for schooling and children's needs from teachers.

Conclusions and Implications

This study supports Sigel's (1988) claim that beliefs are contextualised by culture. The philosophical traditions and teacher education learning experiences are linked to the content of the pre-service teachers' beliefs about teaching and learning. Those traditional Chinese beliefs and learning experiences provide a set of ideal images of teaching and learning that are communicated to pre-service teachers. For example, the data demonstrate a connection between Taiwan pre-service teachers' beliefs about teaching and learning and an underlying Confucian philosophy regarding the importance of self-cultivation in the determination of an individual's learning. The findings from this study indicate that beliefs about goals for teaching, enhancing students' socialization, promoting character cultivation and maximizing intellectual abilities, exist in a context of interrelated Chinese education philosophy. A belief that success in teaching is possible through mentorship, affectivity, situational learning and instruction is seen as derived from a philosophical basis. This belief perfectly fits with the current idea that good teaching must be personalized and reflect the teacher's attempt to meet the need of the students (Isenberg, 1992).

There is a growing fusion of traditional Chinese beliefs with Western pedagogy. For example, the concept of open education which is influenced by Western pedagogy emerged from pre-service teachers' responses. Teacher education enables teachers to bridge the gap between Western pedagogical and traditional Chinese beliefs embodied in the Confucian philosophy.

For Chinese pre-service teachers, thinking about their role as a teacher is like learning the art of flower arrangement. One may expect that through mastery of the basic form, in this case the professional knowledge and skill for teaching, the person may expect her or his affective skill to express her or his own creativity. The art of teaching is considered when the teacher who has first mastered knowledge in creating basic forms, devotes her or his affection and own characteristics to achieve the beauty of creativity that transforms students who will be the master of their own learning someday. This study suggests that early childhood pre-service teachers in Taiwan believe that teachers are required to have professional and personal characteristics to teach, to have patience and love to build emotional bonds with students and create emotional climate for learning. The teacher's personal characteristics, affective capability and professional knowledge appear to be the crucial roles for teachers. They also consider that learning, in which students take an initiative role, is self-cultivation.

In examining goals of four teachers college and one polytechnic college, we found a consistency between pre-service teachers' own beliefs and teachers colleges' goals: to help pre-service teachers develop a deep commitment to teaching and their other personal qualities and moral characters as well as to prepare teachers with adequate knowledge and skills in teaching. There is evidence to show that teacher education in Taiwan plays a major role in broadening, preserving and strengthening traditional Chinese educational beliefs.

Floden (1985) claimed that teacher educators need to be aware of pre-service teachers' beliefs. In fact, many preparation programs are operated by teacher educators who have little knowledge of who their students are and the beliefs they hold. So documentation of the teachers' role, images of classroom practices, ways children learn, reasons for schooling, children's needs, and relationships between teachers and students can be applied to the field for use with pre-service teachers by providing teacher educators with a better understanding about pre-service teachers' beliefs. The understanding of their beliefs (the results of this study) makes reference to the requirement to be aware and responsive to the varied perceptions which pre-service teachers brought with them into the programs and the necessity to adapt and extend teacher preparation curriculum for learning to teach in the light of new information and understanding. Brousseau and Freeman (1988) suggest that educational beliefs should become an explicit component of teacher education curricula. Some educators have designed course activities and illustrate the ways in which the course challenges pre-service teachers' beliefs in areas in which they proved to be inappropriate (e.g., Bennet, 1997; Feiman-Nemser, McDiarmid, Melnick, & Parker, 1989). Therefore, this study can serve as a tool to improve the quality of teacher education courses, and understand the professional development of early childhood teachers. During the preparation of early childhood teachers, we have to acknowledge that many preconceptions pre-service teachers bring to teacher preparation originate in their particular cultural heritage. These preconceptions inhibit or interfere with their learning to teach. It would, therefore, be advisable to impart to teacher educators some information about these belief patterns and to provide some thought about possible ways of designing and assessing programs. Also, documentation of teachers' beliefs regarding teaching and learning may be another way to direct teacher assessment which is related

to teachers' quality. The pattern of teachers' beliefs listed in this study could be applied to Taiwan teacher education and serve as a mean to assess teacher education programs and pre-service teachers. Results from this study lead us to examine teacher preparation in new ways, and help us to gain a new perspective about the strengths and weaknesses in the ways we prepare our national teachers for young children.

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Table 1

Common Theme Labeled in Each Category

Category	Common theme
Teacher role	1. Teacher characteristics 2. Professionalism 3. Consideratic.. of students
Images of classroom practice	1. Build relationships 2. Teacher characteristics 3. Consider individual students 4. Pedagogical concepts
Ways children learn	1. Self-discovery approach to learning 2. Roles as teachers 3. Students' characteristics 4. Individual way of learning
Reasons for schooling	1. Academic goals 2. Personal goals 3. Inculcate social, cultural learning
Children's needs	1. Personal needs 2. Character cultivation 3. Cultural and social needs 4. Academic needs
Relationship between teachers and students	1. Roles 2. Characteristics 3. Working relationships

Table 2

Students' Comments regarding Goal-oriented Views

Goals for teaching	Comments
Socialization	(1) appropriate forms of behavior (2) courtesy, etiquette (3) cooperation (4) interpersonal relationship (5) socialization (6) social skill, personal relationship and appropriate behavior (7) principle of behaving ourselves
Character cultivation	(1) spiritual development (good and virtuous) (2) sense of right and wrong (quality of judgement) (3) attitude of life (4) honesty and sincerity
Intellectual abilities	(1) cognition (2) knowledge (3) information (4) skill (5) the ability to obtain knowledge

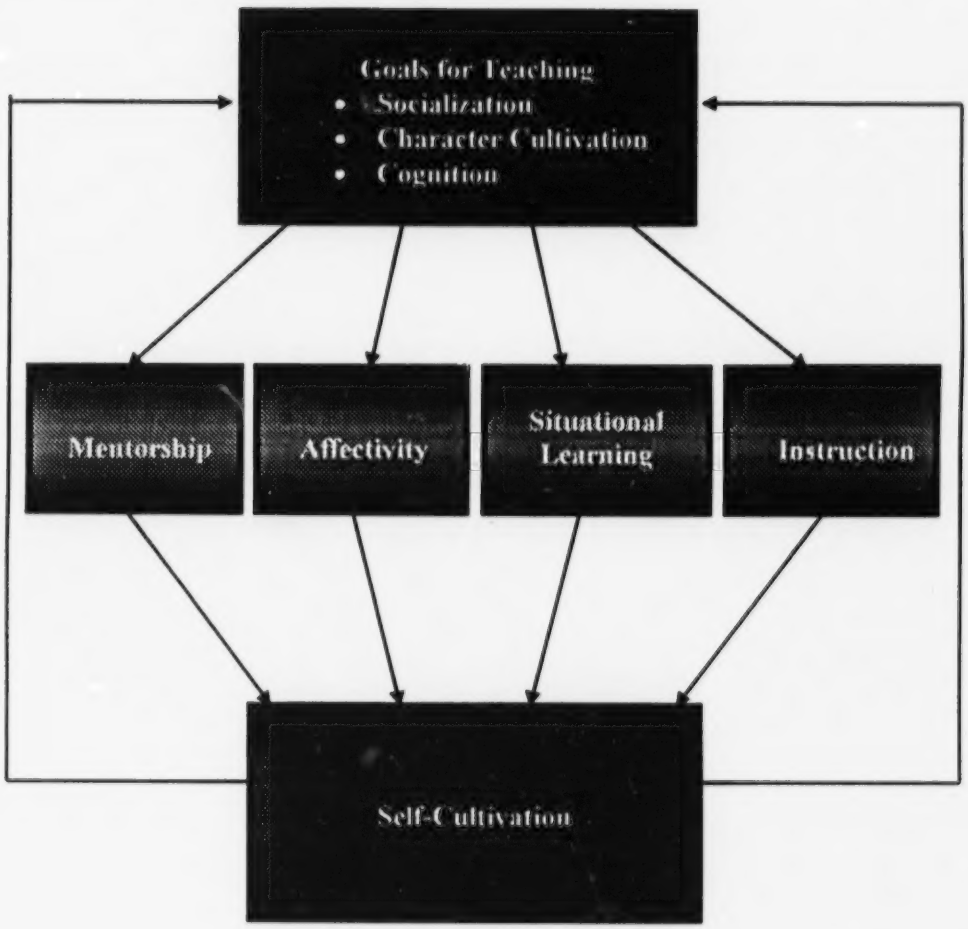

FIGURE 1.

The internal model of teaching and learning in Taiwan

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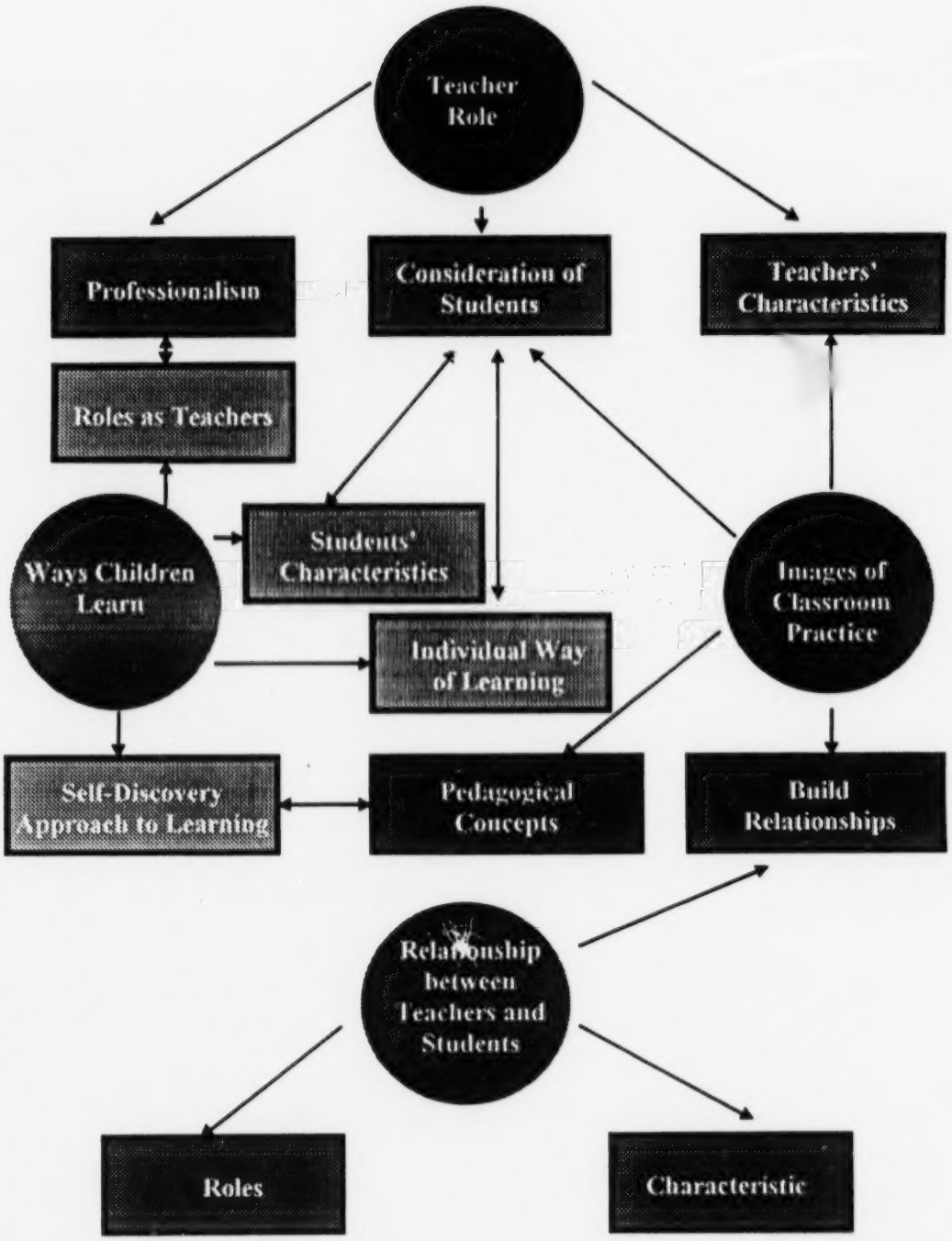

FIGURE 2.

Relationship among teacher role, images of classroom practice, ways children learn and teacher-student relationship

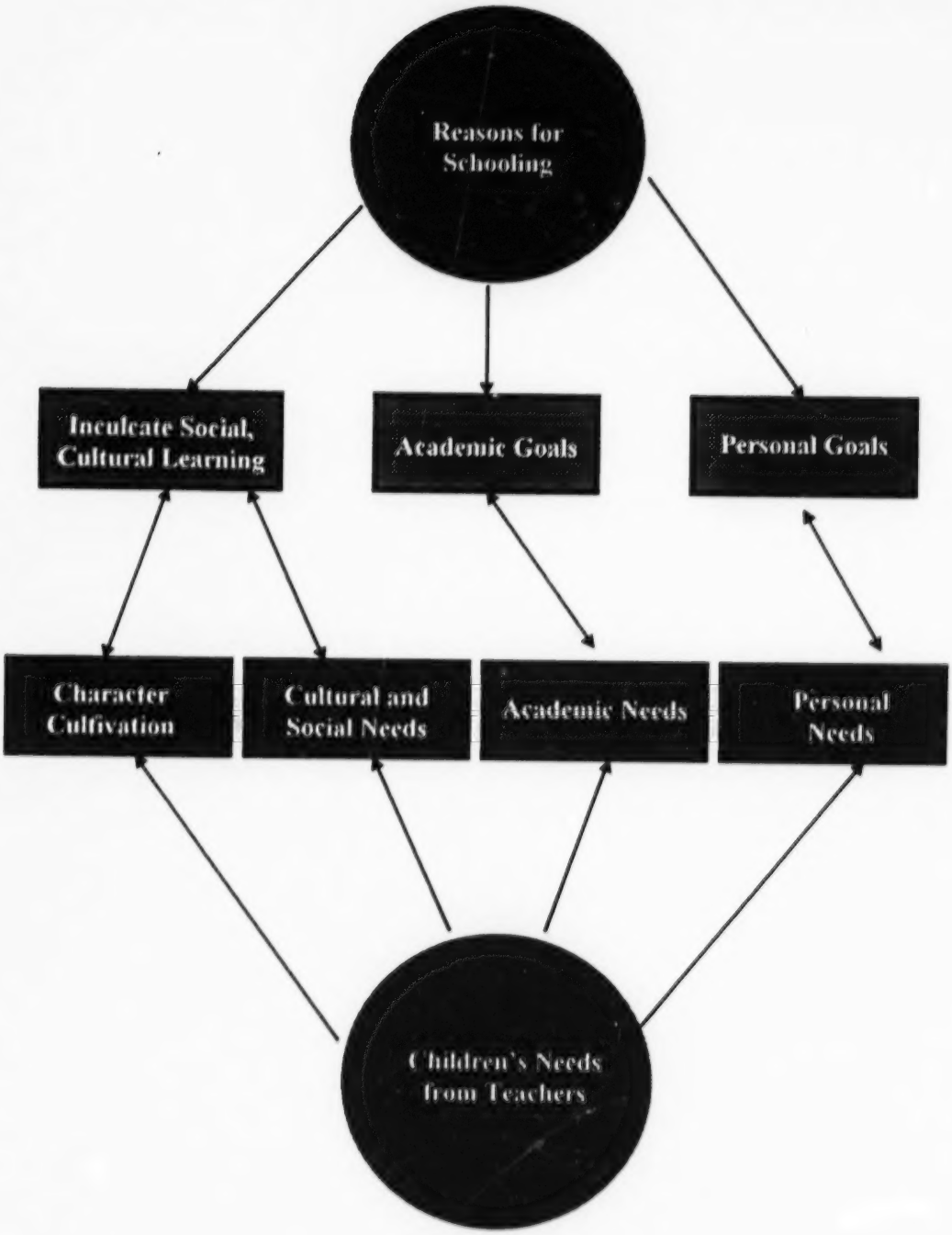

FIGURE 3.

Relationship between reasons for schooling and children's needs

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